

It is not believed that extensions of time are required beyond that which is provided for in documents accompanying this Amendment. However, in the event that extensions of time beyond that which is provided for are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 CFR §1.136(a), and any fees required therefor are hereby authorized to be charged to our Deposit Account 19-2555.

Please enter the following amendment:

IN THE CLAIMS

Please amend the claims as follows where the following clean version of all of the claims are presented and where a copy of the claims with the amendments delineated are set forth below in accordance with the PTO guidelines:

Please modify claims 3, 8 – 9, 16 – 17, 20 – 22, 24, and 26.

Please cancel claims 27 – 32.

Please add new claims 33 – 46.

3. (Amended) A method for measuring a first phase difference between first and second reflected polarized light signal components, the method comprising the steps of:

transmitting a first incident light signal toward a first object, wherein said first object is a magnetic disk;

separating from a reflected light signal that has reflected off said first object a first mixed reflected polarized light signal component having a first phase and a second mixed reflected polarized light signal component having a second phase that is different from said first phase, wherein said first mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to a plane of incidence of said reflected light signal, and wherein said second mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to the plane of incidence of said reflected light signal;

detecting a first intensity of said first mixed reflected polarized light signal component;

detecting a second intensity of said second mixed reflected polarized light signal component; and

determining a difference in phase between said first and second mixed reflected polarized light signal components based upon said first and second intensities.

4. (Not Amended) The method of claim 3 further comprising the step of:

determining a texture on said first object based upon said difference in phase.

5. (Not Amended) The method of claim 3, further comprising the step of:

determining a thickness of a lubricant on said first object based upon said difference in phase.

6. (Not Amended) The method of claim 3, further comprising the step of:

determining a thickness of a carbon layer of said first object based upon said difference in phase.

7. (Not Amended) The method of claim 3, further comprising the step of:
determining a magnetic characteristic of said first object based upon said difference in phase.

8. (Amended) The method of claim 3, further comprising the step of:
polarizing said first incident light signal to generate a first incident polarized light signal component and a second incident polarized light signal component of said first incident light signal, said first and second incident polarized light signal components being orthogonally polarized.

9. (Amended) The method of claim 3, wherein said first and second mixed reflected polarized light signal components are orthogonally polarized.

10. (Not Amended) The method of claim 3, further comprising the step of:
measuring the magneto-optic Kerr effect based upon said difference in phase.

11. (Not Amended) The method of claim 10, further comprising the steps of:
determining a defect exists at a first location on the first object based upon said first and second intensities; and

marking said first location to identify said defect.

12. (Not Amended) The method of claim 11, wherein said marking step further comprises the steps of:


moving a mechanical scribe to a position substantially adjacent to said first location;
positioning said mechanical scribe at substantially said first location; and
marking said first location with said mechanical scribe.

13. (Not Amended) The method of claim 3, further comprising the steps of:
determining a defect exists at a first location on the first object based upon said first and
second intensities; and

marking said first location to identify said defect.

14. (Not Amended) The method of claim 13, wherein said marking step further comprises the steps of:

moving a mechanical scribe to a position substantially adjacent to said first location;
positioning said mechanical scribe at substantially said first location; and
marking said first location with said mechanical scribe.

 16. (Amended) A system for measuring a first phase difference between first and
second mixed reflected polarized light signal components, comprising:

a light source for transmitting a first incident light signal toward a first object wherein said first object is a magnetic disk;

a polarization splitter for separating from a first reflected light signal, that has reflected off of said first object, the first mixed reflected polarized light signal component having a first phase, and the second mixed reflected polarized light signal component having a second phase that is different from said first phase, wherein the first mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to a plane of incidence of said reflected light signal, and wherein the second mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to the plane of incidence of said reflected light signal;

a first detector for detecting a first intensity of the first mixed reflected polarized light signal component;

a second detector for detecting a second intensity of the second mixed reflected polarized light signal component; and

a phase determinator for determining a difference in phase between the first and second mixed reflected polarized light signal components based upon said first and second intensities.

17. (Amended) The system of claim 16, wherein said phase determinator comprises:

a texture eliminator for determining a difference between said first and second intensities to reduce the effect on at least one measured value of a texture on said first object.

18. (Not Amended) The system of claim 16, further comprising:
a thickness determinator for determining a thickness of a lubricant on said first object
based upon said difference in phase.

19. (Not Amended) The system of claim 16, further comprising:
a carbon thickness determinator for determining a thickness of a carbon layer of said first
object based upon said difference in phase.

20. (Amended) The system of claim 16, further comprising:
a magnetic identifier for determining a magnetic characteristic of said first object based
upon said difference in phase.

21. (Amended) The system of claim 16, further comprising:
a Kerr effect determinator for measuring the magneto-optic Kerr effect based upon said
difference in phase.

22. (Amended) The system of claim 21, further comprising:
a defect determinator for determining a defect exists at a first location on the first object
based upon said first and second intensities; and
a mechanical scribe for marking said first location to identify said defect.

23. (Not Amended) The system of claim 22, further comprising:

a scribe positioner for moving a mechanical scribe to a position substantially adjacent to said first location before marking said first location.

24. (Amended) The system of claim 16, further comprising:

a defect determinator for determining a defect exists at a first location on the first object

05 based upon said first and second intensities; and

a mechanical scribe for marking said first location to identify said defect.

25. (Not Amended) The system of claim 24, further comprising:

a scribe positioner for moving a mechanical scribe to a position substantially

adjacent to said first location before marking said first location.

26. (Amended) The system of claim 16, further comprising:

a polarizer for polarizing said first incident light signal to generate a first incident

06 polarized light signal component and a second incident polarized light signal component of said

first incident light signal, said first and second incident polarized light signal components being

orthogonally polarized.

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (New) The method of claim 3 wherein the step of determining a difference

includes:

determining a difference between said first and second intensities to reduce the effect on at least one measured value of a texture on said first object.

34. (New) A method for measuring a first phase difference between first and second reflected polarized light signal components, the method comprising the steps of:

transmitting a first incident light signal toward a first object, wherein said first object is a silicon wafer;

separating from a reflected light signal that has reflected off said first object a first mixed reflected polarized light signal component having a first phase and a second mixed reflected polarized light signal component having a second phase that is different from said first phase, wherein said first mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to a plane of incidence of said reflected light signal, and wherein

said second mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to the plane of incidence of said reflected light signal;

detecting a first intensity of said first mixed reflected polarized light signal component;

detecting a second intensity of said second mixed reflected polarized light signal component; and

determining a difference in phase between said first and second mixed reflected polarized light signal components based upon said first and second intensities.

35. (New) The method of claim 34 further comprising the step of:

determining a texture on said first object based upon said difference in phase.

36. (New) The method of claim 34, further comprising the step of:

determining a thickness of a lubricant on said first object based upon said difference in phase.

37. (New) The method of claim 34, further comprising the step of:

polarizing said first incident light signal to generate a first incident polarized light signal component and a second incident polarized light signal component of said first incident light signal, said first and second incident polarized light signal components being orthogonally polarized.

38. (New) The method of claim 34, wherein said first and second mixed reflected polarized light signal components are orthogonally polarized.

39. (New) The method of claim 34, further comprising the steps of:
determining a defect exists at a first location on the first object based upon said first and second intensities; and
marking said first location to identify said defect.

40. (New) The method of claim 39, wherein said marking step further comprises the steps of:

moving a mechanical scribe to a position substantially adjacent to said first location;
positioning said mechanical scribe at substantially said first location; and
marking said first location with said mechanical scribe.

41. (New) A system for measuring a first phase difference between first and second mixed reflected polarized light signal components, comprising:

a light source for transmitting a first incident light signal toward a first object wherein said first object is a silicon wafer;

a polarization splitter for separating from a first reflected light signal, that has reflected off of said first object, the first mixed reflected polarized light signal component having a first phase, and the second mixed reflected polarized light signal component having a second phase that is different from said first phase, wherein the first mixed reflected polarized light signal

component comprises both P-polarized and S-polarized light relative to a plane of incidence of said reflected light signal, and wherein the second mixed reflected polarized light signal component comprises both P-polarized and S-polarized light relative to the plane of incidence of said reflected light signal;

a first detector for detecting a first intensity of the first mixed reflected polarized light signal component;

a second detector for detecting a second intensity of the second mixed reflected polarized light signal component; and

a phase determinator for determining a difference in phase between the first and second mixed reflected polarized light signal components based upon said first and second intensities.

42. (New) The system of claim 41, wherein said phase determinator comprises:

a texture eliminator for determining a difference between said first and second intensities to reduce the effect on at least one measured value of a texture on said first object.

43. (New) The system of claim 41, further comprising:

a thickness determinator for determining a thickness of a lubricant on said first object based upon said difference in phase.

44. (New) The system of claim 41, further comprising:

a defect determinator for determining a defect exists at a first location on the first object based upon said first and second intensities; and

a mechanical scribe for marking said first location to identify said defect.

45. (New) The system of claim 44, further comprising:

a scribe positioner for moving a mechanical scribe to a position substantially adjacent to said first location before marking said first location.

46. (New) The system of claim 41, further comprising:

a polarizer for polarizing said first incident light signal to generate a first incident polarized light signal component and a second incident polarized light signal component of said first incident light signal, said first and second incident polarized light signal components being orthogonally polarized.
